

CLAIMS

I claim:

Sub B7

1. ~~A system for drilling bore holes in the earth comprising:
a drilling rig having a power source attached to a rotateable pipe container;
a drill pipe that is flexible and is attached to and retainable in said rotateable pipe container, and said rotateable pipe container having an aperture therein through which an end of said drill pipe may be extended and retrieved;
a drill bit attached to said end of said drill pipe; and
a drive mechanism adjacent to said aperture for receipt and movement of said drill pipe therethrough.~~
2. The system as in claim 1 wherein said drill pipe comprising:
an inner conduit having a wire coil located coaxially around said inner conduit.
3. The system as in claim 2 wherein said wire coil having a plurality of wire coil elements oriented at an angle nonorthogonal to a drill pipe axis.
4. The system as in claim 3 wherein a second wire coil is located coaxially around said wire coil.
5. The system as in claim 4 wherein said second wire coil having a plurality of second wire coil elements oriented at an angle nonorthogonal to said drill pipe axis.
6. The system as in claim 5 wherein there is a plurality of wires positioned intermediate said coil element and said second coil element and said

1001576-120601

Sub 107 wires are oriented generally longitudinally relative to said drill pipe axis.

7. The system as in claim 6 wherein said drill pipe has a coupling attached at each end.

8. The system as in claim 1 wherein said drive mechanism comprising:

a rotating gear mechanism driving a generally continuous loop chain;

a plurality of drive blocks attached at each side to said loop chain; each drive block having a pipe trough formed therein with a plurality of ridges formed therein for engagement with a wire coil of said drill pipe; and

a guide trough positioned opposite said drive blocks.

9. The system as in claim 1 wherein there is a conduit positioned adjacent said drive mechanism for receipt of said drill pipe.

10. The system as in claim 9 wherein said conduit having a rotation connector.

11. The system as in claim 1 wherein said drive mechanism comprising:

a plurality of rotating gear mechanisms positioned for engagement with a wire coil of said drill pipe to move said drill pipe through said drive mechanism.

12. The system as in claim 1 wherein said drill pipe comprising a coiled flexible tubing.

100167-13001

Sub 137

13. The system as in claim 12 wherein said rotateable pipe container is a reel and said aperture is located in a tube guide having a tube aperture at an end thereof.

14. The system as in claim 13 wherein said tube guide is supported by a tube guide support attached to said reel at a reel axis and a guide support arm attached to said reel axis.

15. The system as in claim 14 wherein said tube guide support and said guide support arm are attached to said reel axis by a rotating coupling.

16. The system as in claim 12 wherein said drive mechanism is an injector unit.

17. A drill pipe for drilling bore holes in the earth comprising an inner conduit having a wire coil located coaxially around said inner conduit.

18. The system as in claim 17 wherein said wire coil having a plurality of wire coil elements oriented at an angle nonorthogonal to a drill pipe axis.

19. The system as in claim 18 wherein a second wire coil is located coaxially around said wire coil.

20. The system as in claim 19 wherein said second wire coil having a plurality of second wire coil elements oriented at an angle nonorthogonal to said drill pipe axis.

21. The system as in claim 20 wherein there is a plurality of wires positioned intermediate said coil element and said second coil element and said wires are oriented generally longitudinally relative to said drill pipe axis.

100156-10001

22. The system as in claim 21 wherein said drill pipe has a coupling attached at each end.

Sub B7

23. A system for drilling bore holes in the earth comprising:

a drilling rig having a power source attached to a rotateable pipe container;

a drill pipe that is flexible and is attached to and retainable in said rotateable pipe container, and said rotateable pipe container having an aperture therein through which an end of said drill pipe may be extended and retrieved;

a drill bit attached to said end of said drill pipe; and

a drive mechanism adjacent to said aperture for receipt and movement of said drill pipe therethrough wherein said drive mechanism comprising:

a rotating gear mechanism driving a generally continuous loop chain;

a plurality of drive blocks attached at each side to said loop chain;

each drive block having a pipe trough formed therein with a plurality of ridges formed therein for engagement with a wire coil of said drill pipe; and

a guide trough positioned opposite said drive blocks.

24. A system for drilling bore holes in the earth comprising:

a drilling rig having a power source attached to a rotateable pipe container;

a drill pipe that is flexible comprising an inner conduit, a wire coil having a plurality of wire coil elements oriented at an angle nonorthogonal to a drill pipe axis located coaxially around said inner conduit, a second wire coil having a plurality of second wire coil elements oriented at an angle nonorthogonal to said drill pipe axis located coaxially around said wire coil, and

Sub 137

a plurality of wires positioned intermediate said coil element and said second coil element and said wires are oriented generally longitudinally relative to said drill pipe axis;

said drill pipe attached to and retainable in said rotateable pipe container, and said rotateable pipe container having an aperture therein through which an end of said drill pipe may be extended and retrieved;

a drill bit attached to said end of said drill pipe; and

a drive mechanism adjacent to said aperture for receipt and movement of said drill pipe therethrough wherein said drive mechanism comprising:

a rotating gear mechanism driving a generally continuous loop chain;

a plurality of drive blocks attached at each side to said loop chain; each drive block having a pipe trough formed therein with a plurality of ridges formed therein for engagement with a wire coil of said drill pipe; and

a guide trough positioned opposite said drive blocks.

25. A system for drilling bore holes in the earth comprising:

a drilling rig having a power source attached to a rotateable pipe container comprising a reel having a tube guide supported by a tube guide support attached to said reel at a reel axis and a guide support arm attached to said reel axis, and said tube guide support and said guide support arm are attached to said reel axis by a rotating coupling;

a drill pipe comprising a coiled flexible tube that is attached to and retainable in said rotateable pipe container, and said tube support guide having an aperture therein through which an end of said drill pipe may be extended and retrieved;

a drill bit attached to said drill pipe; and

a drive mechanism adjacent to said aperture for receipt and

FOIA b 7 - 9/2/00

Sub B7

~~movement of said drill pipe therethrough.~~

Qdd#27

FOSET-992900T